

Montana Department of Transportation
Research Section
Experimental Program
Helena, Montana 59620-1001

Two Medicine Bridge
RTF-STPHS 1-3(22)2 10
Experimental PavePrep™ Application

Glacier County

Final Report
October, 2002

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This experimental project involved placing a waterproof membrane, PavePrep™, and a 0.15 ft. thick plant mix overlay on the deck of the existing Two Medicine Bridge. This was to preserve the deck from further deterioration and maintain an adequate riding surface until replacement of the bridge by the year 2005. This project is located on NINHS N-1, US-2



Two Medicine Bridge - View of Project looking East

approximate milepost 210 in Glacier County on the Blackfeet Indian Reservation.

Table 1 is the overall averaged rut data.

Table 1

Two Medicine Bridge PavePrep (millimeters) Averaged Rut			
Eastbound		Westbound	
OWP	IWP	IWP	OWP
5.5	3.2	1.8	3.3

Rut measurements were taken from the wheelpaths. However, the overall appearance of the rutting seemed to be bathtub in nature across the lane, making rut measurements difficult to record. This bathtub style rut pattern may be the cause of random travel of the entire roadbed by vehicles. It was observed that vehicles, usually without conflicting traffic, especially large trucks, would travel over the bridge outside the norm of the wheel paths. Sometimes down the middle, or far left or right and in between. This may be due to the narrowness of the bridge and high speed associated with this stretch of highway, making it complicated to accurately measure rut characteristics throughout the evaluation timeframe. Progressive transverse cracking at the east-end approach transition is indicating movement of the bridge.

Rut data after five years of study indicates good performance of the overlay. With no observed transverse cracking on the mat, PavePrep may have added to the performance of the AC cover; but with no established control for comparison, this assumption cannot be qualified. Since earlier documentation did not include the condition of the under deck when the project was placed, this report cannot comment on the effectiveness of the PavePrep material in preventing further deck deterioration.